

THE LOW FODMAP DIET

WHAT IS FODMAP?

The FODMAP diet is a form of elimination diet that focuses specifically on certain types of sugars that should or should not be consumed. Increasing numbers of studies support its use for reducing symptoms of irritable bowel syndrome (IBS), to the point where it can now be considered a first-line IBS treatment.[1-3] The FODMAP diet works in two ways:

1. It is low in sugars that are difficult to absorb. These sugars can lead to increased fermentation and gas.
2. Reducing overall sugar intake reduces the osmotic pull of fluids into the intestine, which can reduce diarrhea. This may explain why some research indicates that the FODMAP diet improves overall symptoms by 50% for both diarrhea- and constipation-dominant IBS, while it only reduces stool frequency for the diarrhea-dominant form.

The FODMAP Sugars (the sugars that should be avoided)

Fermentable Sugars

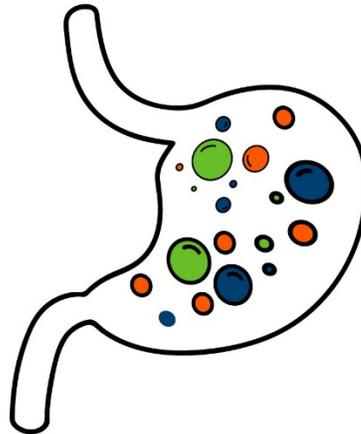
When in contact with gut microbiome, they lead to fermentation and gas production.

Oligosaccharides

These are fructans. They include wheat, rye, onion, garlic, beans, and some vegetables. (This is unfortunate because many of these foods are otherwise quite healthy.) Wheat is omitted for its sugar content, not for its proteins (e.g., gluten). However, a cross-over benefit may occur for people with gluten intolerance.

Disaccharides

An important example is lactose in milk and other dairy products.



Monosaccharides

This includes fructose in high fructose corn syrup, honey, and some fruits.

and

Polyol sweeteners

These include any sugar ending in -ol such as xylitol, sorbitol, etc. Be careful of sugarless chewing gums and any food containing artificial sweeteners.

THE MODIFIED FODMAP DIET

The FODMAP diet can lead to a significantly lowered intake of fruits and vegetables, which can have negative long-term health consequences. Although it has not been extensively studied, some people may benefit from a “modified FODMAP diet,” which allows for

continued intake of these important foods. Consider starting by having patients significantly reduce their FODMaP sugar load by avoiding dairy, wheat (breads and crackers), rye, high-fructose corn syrup, honey, and polyol sugars (first row of Figure 1). If this doesn't work, they can then do the full FODMaP diet, as described in Figure 1.

Consider starting with the first row (modified FODMaP) and progress to full FODMaP if needed.	FODMaP Diet			
	Fructose	Lactose	Oligosaccharides	Polyols
Avoid (modified FODMaP) Start Here 	<input type="checkbox"/> High fructose corn syrup and Honey	<input type="checkbox"/> Anything made from cow, goat or sheep milk that would include lactose.	<input type="checkbox"/> Cereals: Wheat & Rye. Avoid breads, pasta, crackers and biscuits. (Avoid white foods)	<input type="checkbox"/> Sweeteners that end in "ol": Sorbitol, mannitol, xylitol, malitol. Beware of sugarless gum and anything that is artificially sweetened.
Avoid	<input type="checkbox"/> Fruits: apples, pears, peaches, mango, watermelon, nectarine, plums, prunes, cherries and lychee.	<input type="checkbox"/> Yogurt	<input type="checkbox"/> Legumes: chickpeas, lentils, kidney beans, baked beans.	
Avoid	<input type="checkbox"/> Avoid large servings of fruit in one sitting. Avoid dried fruit, bowls of fruit or fruit juice.	<input type="checkbox"/> Cheeses	<input type="checkbox"/> Vegetables: artichokes, asparagus, Brussels sprout, broccoli, cabbage, garlic, onions, peas, and leaks.	
OK to Eat	<input checked="" type="checkbox"/> Fruit: blueberry, banana, grapefruit, grape, honeydew melon, lemon, lime, mandarin, orange, passion fruit, raspberry, strawberry, tangelo, kiwifruit.	<input checked="" type="checkbox"/> Lactose free milk and rice milk. Ice cream substitutes such as sorbet and gelati. Butter is OK in small amounts.	<input checked="" type="checkbox"/> Cereals: gluten-free products. Spelt bread and cereal products.	<input checked="" type="checkbox"/> Sweeteners: Any sweetener other than polyols. This can include stevia (Truvia), agave, sucralose (Splenda), saccharine (Sweet'N Low), aspartame (Equal, NutraSweet)
OK to Eat	<input checked="" type="checkbox"/> Honey Substitutes: maple syrup in small amounts.	<input checked="" type="checkbox"/> Lactose free yogurt	<input checked="" type="checkbox"/> Garlic Substitute: garlic-infused oils.	
OK to Eat		<input checked="" type="checkbox"/> Hard cheeses such as cheddar, asiago & parmesan.	<input checked="" type="checkbox"/> Vegetables: Carrot, celery, corn, capsicum, eggplant, green beans, lettuce, pumpkin, tomato, bok choy and bamboo.	

Figure 1. The FODMaP diet. This chart was modified from a chart by Gibson and colleagues.[4]

AUTHOR(S)

“The FODMaP Diet” was written by [David Rakel](#), MD (2014). Sections were adapted from “[Evidence-based dietary management of functional gastrointestinal symptoms: The FODMAP approach](#)” by PR Gibson and SJ Shepherd.

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REFERENCES

1. Halmos EP, Power VA, Shepherd SJ, Gibson PR, Muir JG. A diet low in FODMAPs reduces symptoms of irritable bowel syndrome. *Gastroenterology*. 2014;146(1):67-75.e65.
2. de Roest RH, Dobbs BR, Chapman BA, et al. The low FODMAP diet improves gastrointestinal symptoms in patients with irritable bowel syndrome: a prospective study. *Int J Clin Pract*. 2013;67(9):895-903.
3. Staudacher HM, Whelan K, Irving PM, Lomer MC. Comparison of symptom response following advice for a diet low in fermentable carbohydrates (FODMAPs) versus standard dietary advice in patients with irritable bowel syndrome. *J Hum Nutr Diet*. 2011;24(5):487-495.
4. Gibson PR, Shepherd SJ. Evidence-based dietary management of functional gastrointestinal symptoms: The FODMAP approach. *J Gastroenterol Hepatol*. 2010;25(2):252-258.